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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/741,676	12/19/2003	Jaroslaw J. Sydir	Intel-019PUS	4166

7590 06/13/2008

Daly, Crowley & Mofford, LLP
c/o PortfolioIP
P.O. Box 52050
Minneapolis, MN 55402

EXAMINER	
HAILU, TESHOME	
ART UNIT	PAPER NUMBER
2139	

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06/13/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/741,676	SYDIR ET AL.	
	Examiner	Art Unit	
	TESHOME HAILU	2139	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16 and 18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in reply to the pre-appeal filed on February 07, 2008.

2. Claim 17 has been canceled.

3. Claims 1-16 and 8 are pending.

Response to Amendment

4. Applicant's arguments with respect to claims 1-16 and 8 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Deng et al (US 6,701,432) in view of Walmsley (US 7,165,824).

As per claim 1 Deng discloses:

A processor, comprising: an authentication buffer configured to store authentication data including ciphered-network-packet data subject to authentication, (column 5, line 45-50, authentication engine 404 assures that a communication (packet) is authentic. In one implementation MD5 and SHA1

algorithms are invoked to verify authentication of packets. Authentication buffer 406 is a temporary buffer for storing partial results generated by authentication engine 404).

Network packet data subject only to authentication and not to ciphering, (column 11, 1-6, the process begins after a packet is received at a network interface and DMA'ed to dual-port memory 203 (802). If the packet is permitted (804) after the firewall inspection (803) and authentication is needed (806), the following operations are performed). Encryption is optional (see fig.7, block 706).

At least one authentication core coupled to the authentication buffer to authenticate the authentication data from the authentication buffer. (Column 11, line 7-11, an authentication algorithm is selected (808). In one implementation, two authentication algorithms (MD5 and SHA1) are included in authentication engine 404.

Network packet data subject to ciphering and authentication, wherein tile authentication buffer includes a circular first-in-first-out (FIFO) arrangement; (see fig 4, block 406 and 402).

Deng does not explicitly disclose about the circular FIFO arrangement. However, on the same field of endeavor, Walmsley teaches this limitation as, (a circular buffer, both the fifo read and write-pointers wrap-around to zero after they reach two).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention was made, to modify the teaching of Deng and include the circular FIFO arrangement using the teaching of Walmsley in order to arrange the packet authentication in accordance to the time that the packet arrived to the authenticator and avoid the packet delay by using First in First out (FIFO) method.

Claims 5, 9 and 14 are rejected under the same reason set forth in rejection of claim 1:

As per claim 2 Deng in view of Walmsley discloses:

Deng fails to disclose the circular FIFO arrangement includes a moveable start of data pointer and a moveable end of data pointer. However, on the same field of endeavor, Walmsley teaches this limitation as, (a circular buffer, both the fifo read and write-pointers wrap-around to zero after they reach two).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention was made, to modify the teaching of Deng and include the circular FIFO arrangement includes a moveable start of data pointer and a moveab using the teaching of Walmsley in order to arrange the packet authentication in accordance to the time that the packet arrived to the authenticator and avoid the packet delay by using First in First out (FIFO) method.

Claims 6 and 12 are rejected under the same reason set forth in rejection of claim 2:

As per claim 3 Deng in view of Walmsley discloses:

The processor of Claim 1, wherein the network processor further includes at least one cipher core adapted to operate with a cipher algorithm and the at least one authentication core is adapted to operate with an authentication algorithm, (see fig 4, block 406 and 402).

Deng fails to discloses a size of the authentication buffer is selected in accordance with a data block size associated with the cipher algorithm and a data block size associated with the authentication algorithm. However, on the same field of endeavor, Walmsley teaches this limitation as, (The time available to write the data is a function of the size of the buffer in DRAM. 1.5 buffering means 4 color pixel (32 bits) must be written every SF.sup.2/2 (scale factor) cycles. Therefore, at a scale factor of SF, 64 bits are required every SF.sup.2 cycles.).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention was made, to modify the teaching of Deng and include the size of buffer is selected in accordance with a data block size using the teaching of Walmsley in order to arrange the memory (buffer) according to the data and allocate enough storage space.

Claims 7, 13 and 18 are rejected under the same reason set forth in rejection of claim 3:

As per claim 4 Deng in view of Walmsley discloses:

The processor of Claim 1, wherein the authentication core is adapted to authenticate the authentication data from the authentication buffer as blocks of authentication data. (column 5, line 45-50, authentication engine 404 assures that a communication (packet) is authentic. In one implementation MD5 and SHA1 algorithms are invoked to verify authentication of packets. Authentication buffer 406 is a temporary buffer for storing partial results generated by authentication engine 404).

Claim 8 is rejected under the same reason set forth in rejection of claim 4:

As per claim 10 Deng in view of Walmsley discloses:

The method of Claim 9, wherein the moving to an authentication buffer authentication data comprises selecting the authentication buffer from among a plurality of authentication buffers. (Column 5, line 45-50, authentication engine 404 assures that a communication (packet) is authentic. In one implementation MD5 and SHA1 algorithms are invoked to verify authentication of packets. Authentication buffer 406 is a temporary buffer for storing partial results generated by authentication engine 404).

Claim 15 is rejected under the same reason set forth in rejection of claim 10:

As per claim 11 Deng in view of Walmsley discloses:

The method of Claim 9, further including: setting a start of data pointer and an end of data pointer to respective initial locations; setting the end of data pointer in accordance with the moving tile authentication data to the authentication buffer; setting the start of data pointer in accordance with the moving to the authentication core the block of data from the authentication buffer. (column 3, 42-48, the first portion of rules can include a pointer to a location in the second portion of rules. The pointer can be in the form of a rule that includes both a pointer code and also an address in the external memory designating a next rule to evaluate when screening a current packet. The next rule to evaluate is included in the second portion of rules.

Claim 16 is rejected under the same reason set forth in rejection of claim 11:

Conclusion

7. The prior art made or record and not relied upon is considered pertinent to applicant's disclosure.

TITLE: Multi-level boot hierarchy for software development on a integrated circuit, US Pub. No. 2007/0006150.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TESHOME HAILU whose telephone number is (571)270-3159. The examiner can normally be reached on Mon-Fri 7:30a.m. to 5:00p.m. PST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kristine L. Kincaid can be reached on (571) 272-4063. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Teshome Hailu

May 28, 2008

/Kristine Kincaid/
Supervisory Patent Examiner, Art Unit 2139

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